A management information repository for distributed applications management

Full text   📄Pdf (227 KB)

Source   **IBM Centre for Advanced Studies Conference** archive
Proceedings of the 1996 conference of the Centre for Advanced Studies on Collaborative research table of contents
Toronto, Ontario, Canada
Page: 26
Year of Publication: 1996

Authors   Patrick Martin   Dept. of Computing and Information Science, Queen's University at Kingston
Wendy Powley Dept. of Computing and Information Science, Queen's University at Kingston

Additional Information: abstract   references   citings   index terms   collaborative colleagues   peer to peer

Tools and Actions: Find similar Articles   Review this Article
Save this Article to a Binder   Display Formats: BibTex   EndNote   ACM Ref

↑ ABSTRACT

The Management of Distributed Applications and Systems (MANDAS) project addresses problems arising in the management of distributed applications. Specifically, we are studying the areas of configuration management, fault management, performance management, and application metrics and modeling. We are also investigating the tools, techniques, and services needed to support the above management applications. The MANDAS *Management Information Repository* (MIR) provides database support for the management applications and supports their integration into a single management environment.In this paper, we examine the problem of distributed applications management to extract the requirements for an MIR. We present an information model for distributed applications management and outline a prototype MIR developed for the MANDAS project.

↑ REFERENCES

Note: OCR errors may be found in this Reference List extracted from the full text article. ACM has opted to expose the complete List rather than only correct and linked references.

1 M. A. Bauer , P. J. Finnigan , J. W. Hong , J. A. Rolia , T. J. Teorey , G. A. Winters, Reference architecture for distributed systems management, IBM Systems Journal, v.33 n.3, p.426-444, July 1994

2 {2} J. Haritsa, M. Ball, N Roussopoulos, A. Datta, and J. Baras. MANDATE: MAnaging Networks using DAtabase TEchnology. IEEE Journal on Selected Areas of Communication, 11(9):1360-1372,

1993.

3   Greg Hills , Jerome A. Rolia , Giuseppe Serazzi, Performance Engineering of Distributed Software Process Architectures, Proceedings of the 8th International Conference on Modelling Techniques and Tools for Computer Performance Evaluation: Quantitative Evaluation of Computing and Communication Systems, p.357-371, September 20-22, 1995

4   {4} J. Hong, M. Bauer, and J. Benett. Integration of the directory service in distributed systems management. In Proc. of 1992 Conference on Parallel and Distributed Systems, pages 142-149, Hsin Chu, Taiwan, December 1992.

5   {5} IBM. IBM VisualAge C++ Distributed Application Development Toolkit for OS/2. User's Guide (Second Edition), February 1996.

6   {6} J. Mylopoulos, A. Borgida, M. Jarke, and K. Koubarakis. Telos: A language for representing knowledge about information systems (revised). Technical Report KRR-TR-89-1, Department of Computer Science, University of Toronto, August 1990.

7   Ouri Wolfson , Soumitra Sengupta , Yechiam Yemini, Managing Communication Networks by Monitoring Databases, IEEE Transactions on Software Engineering, v.17 n.9, p.944-953, September 1991

8   {8} Object Management Group, Framingham MA. The Common Request Broker: Architecture and Specification, 1993.

9   {9} Open Software Foundation Cambridge MA. The OSF Distributed Computing Environment Rationale, 1991.

10   Graeme S. Perrow , James W. Hong , Hanan L. Lutfiyya , Michael A. Bauer, The abstraction and modelling of management agents, Proceedings of the fourth international symposium on Integrated network management IV, p.466-478, January 1995

11   Kerry Raymond, Reference Model of Open Distributed Processing: a Tutorial, Proceedings of the IFIP TC6/WG6.1 International Conference on Open Distributed Processing II, p.3-14, September 13-16, 1993

12   {12} J. Rolia, C. Woodside, V. Vetland, R. Bunt, D. Eager, M. Bauer, J. Hong, H. Lutfiyya, J. Black, T. Kunz, D. Taylor, P. Martin, T. Teory, and P. Finnigan. Distributed application management, the mandas project. In Proc. of the 4th IFIP/IEEE International Symposium on Integrated Network Management, Ottawa, Ontario, October 1995.

13   Morris Sloman, Network and distributed systems management, Addison-Wesley Longman Publishing Co., Inc., Boston, MA, 1994

↑ CITINGS 2

Asham El Rayess , Jerome A. Rolia, Automatic generation of performance models using the distributed management framework (DMF), Proceedings of the 1997 conference of the Centre for Advanced Studies on Collaborative research, p.5, November 10-13, 1997, Toronto, Ontario, Canada

Hanan L. Lutfiyya , Andrew D. Marshall , Michael A. Bauer , Patrick Martin , Wendy Powley, Configuration maintenance for distributed applications management, Proceedings of the 1997 conference of the Centre for Advanced Studies on Collaborative research, p.16, November 10-13, 1997, Toronto, Ontario, Canada

↑ INDEX TERMS

Primary Classification:
  C. Computer Systems Organization
   ↳ **C.2** COMPUTER-COMMUNICATION NETWORKS
    ↳ **C.2.4** Distributed Systems
     ↳ **Subjects:** Distributed applications

Additional Classification:
  C. Computer Systems Organization
   ↳ **C.4** PERFORMANCE OF SYSTEMS
    ↳ **Subjects:** Modeling techniques

  D. Software
  ↳ **D.2** SOFTWARE ENGINEERING
   ↳ **D.2.8** Metrics
    ↳ **Subjects:** Performance measures
   ↳ **D.2.9** Management
    ↳ **Subjects:** Software configuration management

  H. Information Systems
  ↳ **H.2** DATABASE MANAGEMENT
   ↳ **H.2.1** Logical Design
    ↳ **Subjects:** Data models
   ↳ **H.2.7** Database Administration
    ↳ **Subjects:** Data warehouse and repository

General Terms:
Algorithms, Design, Experimentation, Management, Theory

Keywords:
distributed applications management, information modeling, repositories

↑ Collaborative Colleagues:

Patrick Martin:	Rateb Abu-Hamdeh	Hanan L. Lutfiyya	Berni Schiefer	Hamzeh Zawawy
	David Barrowman	Ian A. MacLeod	Heidi Scott	Min Zheng
	Samuel Bassetto	Ian A. Macleod	Ali Siadat	Zhenjun Zhu
	Michael A. Bauer	Andrew D. Marshall	Michel Sim	
	Darcy Benoit	Hussein T. Mouftah	David B. Skillicorn	
	Darcy Gerard Benoit	Brent Nordin	Ted J. Wasserman	
	James R. Cordy	John R. Phillips	Andrew Weston	
	Hossam Hassanein	Wendy Powley	Gerald Winters	
	Hoi-Ying Li	Haider Rizvi	Yongli Xi	
	Zhengang Liang	Keri Romanufa	Xiaoyi Xu	
Wendy Powley:	Michael A. Bauer	Andrew Weston		
	Darcy Benoit	Yongli Xi		

Said Elnaffar   Xiaoyi Xu
Hoi-Ying Li   Min Zheng
Hanan L. Lutfiyya
Andrew D. Marshall
Pat Martin
Patrick Martin
Keri Romanufa
Wenhu Tian

↑ **Peer to Peer - Readers of this Article have also read:**

- Data structures for quadtree approximation and compression **Communications of the ACM**
  28, 9
  Hanan Samet

- A hierarchical single-key-lock access control using the Chinese remainder theorem **Proceedings of the 1992 ACM/SIGAPP Symposium on Applied computing**
  Kim S. Lee , Huizhu Lu , D. D. Fisher

- The GemStone object database management system **Communications of the ACM** 34, 10
  Paul Butterworth , Allen Otis , Jacob Stein

- Putting innovation to work: adoption strategies for multimedia communication systems **Communications of the ACM** 34, 12
  Ellen Francik , Susan Ehrlich Rudman , Donna Cooper , Stephen Levine

- An intelligent component database for behavioral synthesis **Proceedings of the 27th ACM/IEEE conference on Design automation**
  Gwo-Dong Chen , Daniel D. Gajski

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	12	scan$4 adj3 server adj3 directory	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 14:00
L2	5	scan$4 adj3 directory adj3 nodes	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 14:00
L16	0	(2002/0049749).CCLS.	US-PGPUB; USPAT; USOCR; EPO	OR	OFF	2006/09/14 14:31
L17	1	("20020049749").PN.	US-PGPUB; USPAT; USOCR; EPO	OR	OFF	2006/09/14 16:00
L18	74	directory near2 thread	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 16:01
L19	3	directory near2 thread with scan	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 16:01
L20	3	directory near2 thread with read	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 16:04
L21	82	file near2 thread with read	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 16:08
L22	6	file near2 thread with scan	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 16:04
L23	19	directory adj thread	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 16:12

L24	15	thread with scanning with server	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 16:14
L25	31	thread with scan$4 with server	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 16:15
L26	72	thread with scan$4 with storage	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 16:16
S1	57	file adj walk	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 13:54
S2	1	file adj walk with server	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/12 18:35
S3	4	file adj walk same server	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/12 18:36
S4	4	file adj walk same (server directory)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/12 18:36
S5	8277	((file adj walk) or scan) same (server directory)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/12 18:37
S6	3856	((file adj walk) or scan) with (server directory)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/12 18:37
S7	4440	(scan search) near2 (file directory) with (statistics information data)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 09:31

EAST Search History

S8	183	(scan$3 search$3) near2 (file directory) with (collect$3 gather$3) near2(statistics information data)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 10:07
S9	1	(scan$3 search$3) near2 (file directory) with (collect$3 gather$3) near2 (statistics information data) with agent	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 10:07
S10	11	(scan$3 search$3) near2 (file directory) with (collect$3 gather$3) near2 (statistics information data) with summary	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 10:12
S11	15	(scan$3 search$3 compil$3) near2 (file directory) with (collect$3 gather$3) near2 (statistics information data) with summary	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 10:18
S12	1	(scan$3 search$3 compil$3) near (file directory) near2 (statistics information data) with summary	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 10:19
S13	1713	(scan$3 search$3 compil$3) near (file directory) near2 (statistics information data)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 10:21
S14	13	(scan$3 search$3 compil$3) near (file directory) near2 (statistics information data) same summary	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 10:24
S15	3	summariz$5 with directory near information	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 10:24
S16	3	summariz$5 with directory near (information statistics)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 10:26
S17	98	(accumulat$3 summariz$5) near2 (directory file) near (information statistics)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 10:44

EAST Search History

S18	261	determin$3 with number with files with directory	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 10:30
S19	32	determin$3 with number near2 files near2 directory	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 10:34
S20	278	monitor with storage near2 server	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 10:32
S21	3	monitor with storage near2 server same (GUI MMA)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 10:32
S23	1005	server near2 management near2 application	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 10:45
S24	90	server near2 management near2 application same (storage with (statistics information))	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 10:50
S25	151	server near2 management near2 application same (stor$3 with (statistics information))	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 11:55
S26	11	(contents near2 directory) same (characteristic near2 file)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 13:39
S27	232	(contents near2 directory) same (information near2 file)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 13:40
S28	41	(contents near2 directory) same (information near2 file) with (size date location)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 13:45

S29	0	server storage statistics administrator	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	WITH	ON	2006/09/13 13:46
S30	62	server storage statistics administrator	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	SAME	ON	2006/09/13 14:08
S31	72	server storage (statistics or file adj information or directory adj informtion) administrator	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	SAME	ON	2006/09/13 14:51
S32	12	(count$3 determin$3) adj number adj2 (files adj2 directory)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 14:59
S33	421	(count$3 determin$3) adj number adj2 (files child$3 node adj2 directory)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 15:24
S34	9675	filer	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 15:24
S35	9704	netapp filer	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 15:24
S36	67	netapp with filer	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 15:26
S37	71	network adj attached adj storage with filer	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 15:27
S38	11599	("multi-appliance management application") or MMA	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 16:38

EAST Search History

S39	1	("multi-appliance management application") or MMA with filer	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 16:38
S40	1	("multi-appliance management application") or MMA same filer	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 16:38
S41	241	("multi-appliance management application") or MMA same (filer or NAS)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 16:38
S42	241	("multi-appliance management application") or MMA same NAS	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 16:39
S43	79	("multi-appliance management application") or MMA with NAS	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 16:59
S44	2	analyz$3 with file adj data with directory	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 17:06
S45	168	file adj thread directory adj thread	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 17:07
S46	9	file adj thread and directory adj thread	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 17:13
S47	1271	file adj storage with manage$4	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 17:40
S48	5	file adj storage with manage$4 same scan	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 17:14

S49	167	file adj storage with manage$4 same number	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 17:16
S50	21	file adj storage with manage$4 same number near (file nodes)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 17:22
S51	243	directory file count	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	WITH	ON	2006/09/13 17:22
S52	15	store directory file count	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	WITH	ON	2006/09/13 17:22
S53	72	stor$3 directory file count	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	WITH	ON	2006/09/13 17:36
S54	4	stor$3 directory node count	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	WITH	ON	2006/09/13 17:38
S55	3873	(identify$3 or stor$3) directory structure	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	WITH	ON	2006/09/13 17:39
S56	814	file adj storage with management	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 17:40
S57	101	file adj storage adj management	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 17:40
S58	7	file adj storage adj management with server	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 17:40

EAST Search History

S59		13	file adj storage adj management same server	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/13 17:41
S60		1	("6346954").PN.	US-PGPUB; USPAT; USOCR; EPO	OR	OFF	2006/09/14 09:53
S61		3	scan$4 near2 directory with thread	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 09:57
S62		23	scan$4 near2 file with thread	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 10:00
S63		18	scan$4 near2 node with thread	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 10:00
S64		0	scan$4 near2 child adj node with thread	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 10:34
S65		18	scan$4 near2 node with thread	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 10:00
S66		1	"multi-appliance management application"	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 10:07
S68		1	multi-appliance near management near application	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 10:08
S69		1	multi-appliance near management near (application program)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 10:11

S70	19267	management near (application program)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 10:12
S71	9080	management adj application	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 10:12
S72	28	management adj application same storage adj server	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 10:13
S73	8	scan$4 near2 child adj node	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 10:37
S74	109	(count$3 determin$3) with number adj2 child adj2 nodes	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 13:22
S75	41	(count$3 determin$3) adj2 number adj2 child adj2 nodes	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 11:08
S76	0	(count$3 determin$3) adj2 number adj2 child adj2 nodes with directory	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 10:38
S77	3	(count$3 determin$3) adj2 number adj2 child adj2 nodes with server	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 10:38
S78	1	(count$3 determin$3) adj2 number adj2 (nodes items) adj2 directory	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 11:09
S79	15	(count$3 determin$3) adj2 number adj2 (nodes files items) adj2 directory	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 11:10

S80	15	(count$3 determin$3) adj2 number adj2 (nodes files child$3 items) adj2 directory	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 11:16
S81	13	(count$3 determin$3) adj2 number adj2 (nodes files child$3 items) adj2 server	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 11:17
S82	3260	reference adj count	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 11:41
S83	534	(subtracting decrement$3 reduc$3) near2 reference adj count	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 11:42
S84	69	(subtracting decrement$3 reduc$3) near2 reference adj count same server	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 11:47
S85	3	(subtracting decrement$3 reduc$3) near2 count same server adj (node item child children)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 11:50
S86	1	(subtracting decrement$3 reduc$3) near2 count same directory adj (node item child children)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 11:51
S87	259	(subtracting decrement$3 reduc$3) near2 count near2 (node item child children)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 11:52
S88	1	(subtracting decrement$3 reduc$3) near2 count near2 (node item child children) same directory	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 11:53
S89	58	(subtracting decrement$3 reduc$3) near2 count near2 (node item child children) and directory	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 13:16

S90	0	scan directory increment count	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	WITH	ON	2006/09/14 13:17
S91	0	(scan near directory) same (increment near count)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 13:17
S92	208	(scan search near directory) same (increment near count)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 13:18
S93	86	(scan search near directory) with (increment near count)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 13:19
S94	0	((scan or search) near directory) with (increment near count)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 13:19
S95	129	(scan search near directory) with ((increment or increase) near count)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 13:19
S96	0	((scan or search) near directory) with ((increment increase) near count)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 13:19
S97	11	(count$3 determin$3) with number adj2 child adj2 nodes with (storage server system folder directory)\	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 13:22
S98	11	(count$3 determin$3) with number adj2 child adj2 nodes with (storage server system folder directory)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 13:23
S99	441	(count$3 determin$3) with number adj2 nodes with (storage server system folder directory)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 13:44

S10 0	143	(count$3 determin$3) adj2 number adj2 nodes with (storage server system folder directory)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 13:44
S10 1	19	(count$3 determin$3) adj2 number adj2 nodes adj2 (storage server system folder directory)	US-PGPUB; USPAT; USOCR; EPO; IBM_TDB	OR	ON	2006/09/14 13:44